Michigan Public Service Commission

Standby

Staff Strawman

July 14, 2016

Where we Were

Introductory Comments

Standby is not:

- Net metering
- A lost revenue recovery mechanism

Standby:

- Is a way to recover actual costs related to serving the self-generating customer
- Ensures the utility will serve the self-generating customer's full load in the event of a generator outage.

The Strawman

Standby is voluntary!

But why would anyone sign up?

- Because they come out ahead over their base tariff if their generator performs well.

The Strawman (cont.)

Self-Generation is only mutually beneficial to the customer/utility if it offsets peak

Therefore the base tariff requires a peak component

- All self-generating customers are required to be on a demand or time-of-use or some other tariff that charges more on-peak

The Strawman (cont.)

What protections are there for the customer?

- The charges should be capped as if the customer had purchased all service on the base tariff

How fast do you get to the base tariff?

- Two days on-peak per month is likely too fast, three to four days on-peak per month more reasonable.

The Strawman (cont.)

Who would actually do this?

- Those with generators that have a high reliability on-peak
- Because different types of customers set their peak usage in different ways, it may depend on the customer
  - CHP would likely be a great fit for industrial customers with heat processes and high load factors
  - Solar may be a better fit for commercial customers or customers who set peak based on air conditioning

The Strawman (cont.)

Summary

- Standby is voluntary
- Self-generating customers required to be on a demand or time-of-use or similar rate
- Standby tariff caps at the full requirement tariff
- Customers with high-reliability generators will likely benefit from being on a standby tariff when compared to their standard tariff

Where we Are

MICHIGAN PUBLIC SERVICE COMMISSION

Preliminary Analysis

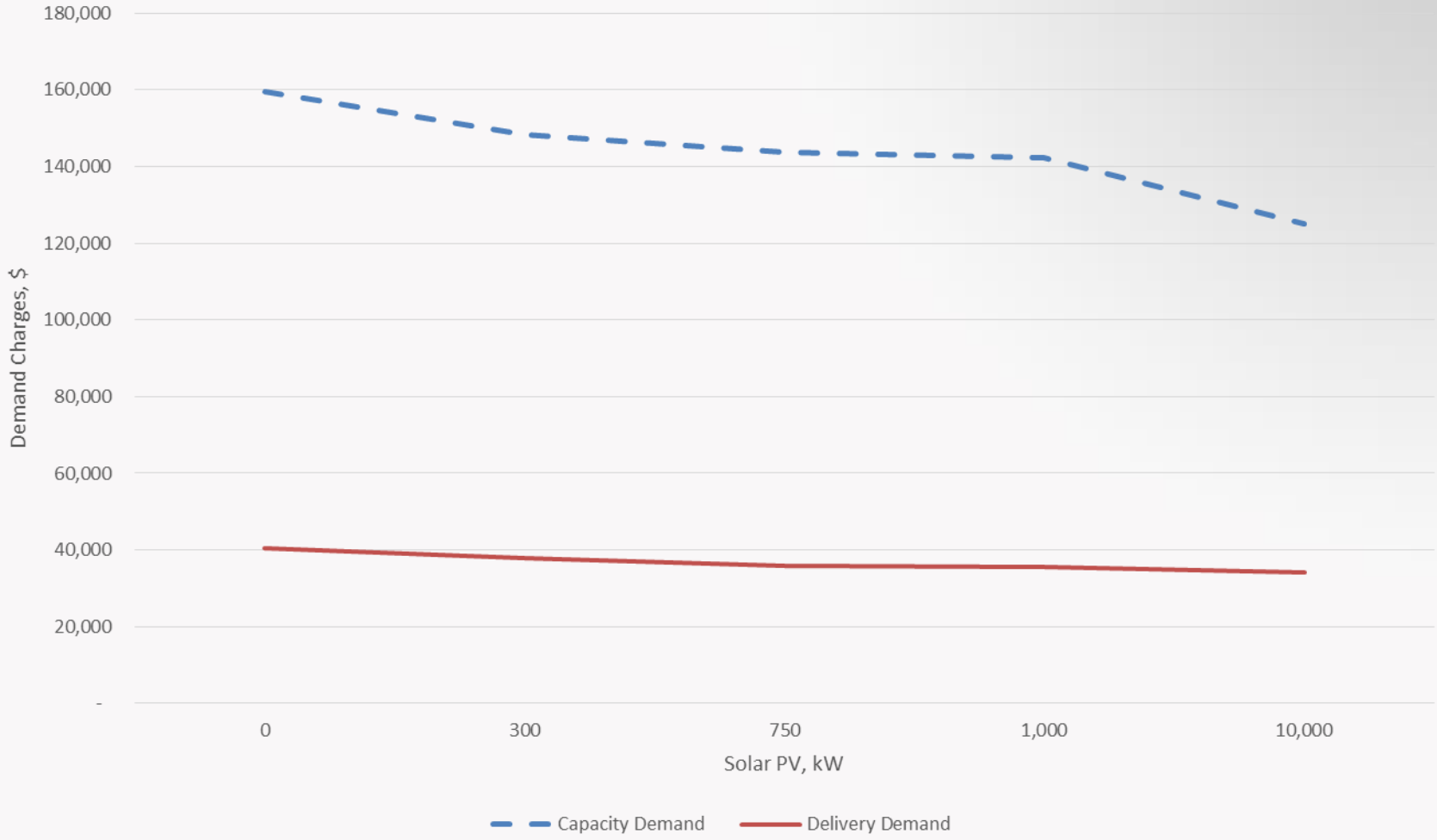
Annual Bill Calculations for a 1 MW Industrial Customer w/Several Solar PV Project Sizes

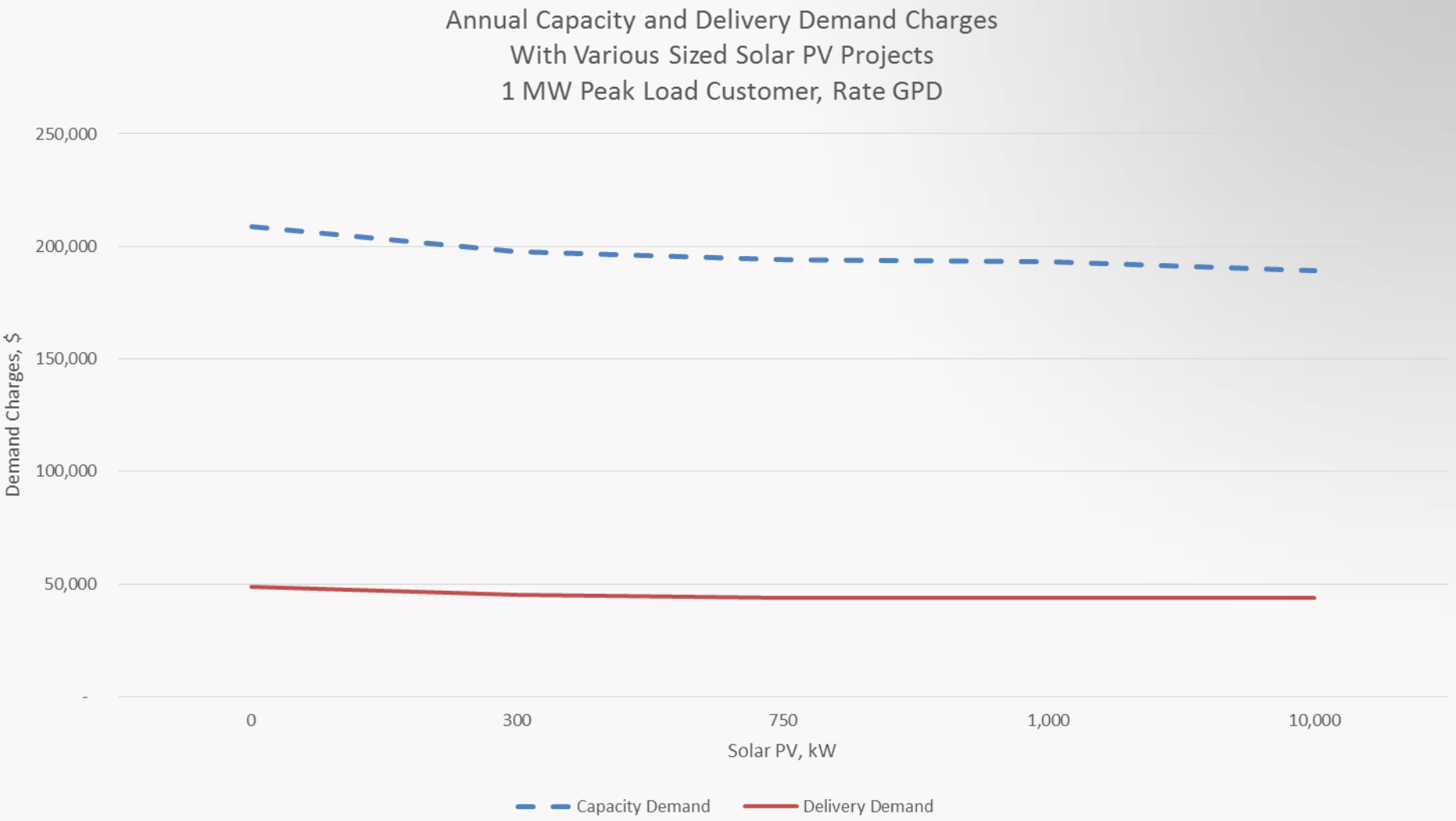
	GP TOU			GPD			D11			GSG-2
Bill w/o Solar $460,000										
Solar PV Project	Bill Reduction $	Excess Sales @ $0.04/kWh $	Total $ Divided by kWh Solar Generation	Bill Reduction $	Excess Sales @ $0.04/kWh $	Total $ Divided by kWh Solar Generation	Bill Reduction $	Excess Sales @ $0.04/kWh $	Total $ Divided by kWh Solar Generation	Bill Reduction GPD to GSG-2 $
300 kW	35,978	-	0.081	33,777	-	0.076	30,089	-	0.067	
750 kW	89,450	296	0.080	67,776	296	0.061	60,472	296	0.054	
1,000 kW	114,622	3,098	0.079	81,835	3,098	0.057	73,223	3,098	0.051	190,187
10,000 kW	224,737	483,810	0.048	143,838	483,810	0.042	141,298	483,810	0.042	243,412

Data calculated using current tariffs, hourly industrial class averaged load data from Consumers Energy, solar data from the Delta College project. This is a high level analysis and does not include the PSCR factor, surcharges, substation ownership credits. Only basic tariff info was used to calculate the example bills.

Annual Bill Calculations for a 600 kW Peak Load Commercial Customer w/Several Solar PV Project Sizes			
		GSD	
Bill w/o Solar			
$332,742			
Solar PV Project	Bill Reduction $	Total Solar Generation kWh	Total $ Divided by kWh Solar Generation
300 kW	78,594	446,760	0.176
750 kW	114,804	1,116,900	0.103
1,000 kW	123,923	1,489,200	0.083
Data calculated using current tariffs, hourly commercial class averaged load data from Consumers Energy, solar data from the Delta College project. This is a high level analysis and does not include the PSCR factor, surcharges, substation ownership credits. Only basic tariff info was used to calculate the example bills.			

Annual Capacity and Delivery Demand Charges
With Various Sized Solar PV Projects
1 MW Peak Load Customer, Rate D11




Annual Capacity and Delivery Demand Charges
With Various Sized Solar PV Projects
1 MW Peak Load Customer, Rate GPD
250,000
200,000
150,000
100,000
50,000
-
Demand Charges, $
0
300
750
1,000
10,000
Solar PV, kW
Capacity Demand
Delivery Demand

GENERAL SERVICE PRIMARY TIME-OF-USE PILOT RATE GPTU

(Continued from Sheet No. D-36.10)

Monthly Rate:

Power Supply Charges:

Charges for Customer Voltage Level 3 (CVL 3)

Energy Charge:		
Off-Peak - Summer	*$0.055212*	per kWh during the calendar months of June - September
Low-Peak - Summer	*$0.072233*	per kWh during the calendar months of June - September
Mid-Peak - Summer	*$0.098536*	per kWh during the calendar months of June - September
High-Peak - Summer	*$0.121620*	per kWh during the calendar months of June - September
Off-Peak - Winter	*$0.071268*	per kWh during the calendar months of October - May
Mid-Peak - Winter	*$0.085975*	per kWh during the calendar months of October - May
High-Peak - Winter	*$0.090738*	per kWh during the calendar months of October - May

Schedule of Hours:

The following schedule shall apply Monday through Friday (except holidays designated by the Company):

Summer:	
Off-Peak Hours:	12:00 AM to 6:00 AM and 11:00 PM to 12:00 AM
Low-Peak Hours:	6:00 AM to *12:00* PM and *7:00* PM to 11:00 PM
Mid-Peak Hours:	*12:00* PM to *2:00* PM and 5:00 PM to *7:00* PM
High-Peak Hours:	*2:00* PM to 5:00 PM

Winter:	
Off-Peak Hours:	12:00 AM to *2:00* PM and *9:00* PM to 12:00 AM
Mid-Peak Hours:	*2:00* PM to *4:00* PM and 7:00 PM to *9:00* PM
High-Peak Hours:	*4:00* PM to 7:00 PM